

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Previously presented) An image processing system for reduction of noise and enhancement of edges in images of a sequence, comprising:
  - a decomposer that decomposes a spatial image signal yielding slices of different content, the decomposition being based on pyramidal decomposition;
  - a filter that temporally filters one or more of the slices for differently filtering the slices according to the content, wherein one or more high frequency slices are filtered at a greater rate than one or more low frequency slices; and
  - a recomposer that recomposes the images of the sequence from at least the temporally filtered slices.
2. (Previously presented) The system of claim 1, wherein the pyramidal decomposition is one of Laplacian or Gaussian decomposition.
3. (Previously presented) The system of claim 1, wherein the temporal filtering comprises adaptive filtering.
4. (Previously presented) The system of claim 1, wherein the temporal filtering comprises motion compensation.
5. (Previously presented) The system of claim 1, wherein the temporal filtering comprises recursive adaptive filtering.

6. (Currently amended) The system of claim 1, ~~further comprising a display device for displaying~~ wherein the high frequency slices are sub-images of the images of the sequence containing moving edges of an object.
7. (Previously presented) A computer-readable storage medium, comprising computer instructions for:  
decomposing a spatial image signal yielding slices of different content, the decomposition being based on pyramidal decomposition;  
temporally filtering one or more of the slices for differently filtering the slices according to the content, wherein one or more high frequency slices are filtered at a greater rate than one or more low frequency slices; and  
recomposing the images of the sequence from at least the temporally filtered slices.
8. (Previously presented) A method of imaging, wherein the method is performed by a computing system, comprising:  
decomposing a spatial image signal yielding slices of different content, the decomposition being based on pyramidal decomposition;  
temporally filtering at least a portion of the slices for differently filtering the slices according to the content, wherein one or more high frequency slices are filtered at a greater rate than one or more low frequency slices; and  
recomposing the images of the sequence from the temporally filtered slices and one or more unfiltered slices.
9. (Previously presented) The method of claim 8, wherein the temporal filtering comprises motion compensation.
10. (Previously presented) The method of claim 8, further comprising applying Laplacian pyramid decomposition to perform the decomposition of the spatial image signal.

11. (Previously presented) The method of claim 8, further comprising applying Gaussian pyramid decomposition to perform the decomposition of the spatial image signal.
12. (Previously presented) The method of claim 8, further comprising applying adaptive temporal recursive filtering to perform the temporal filtering of the at least a portion of the slices.
13. (Currently amended) The method of claim 8, wherein the temporal filtering comprises adaptive filtering the one or more low frequency slices are slices of images containing slowly spatially varying background masses in a sequence of images.
14. (Currently amended) The method of claim 8, ~~further comprising displaying the recomposed images of the sequence~~ wherein the filter comprises one or more temporal filters where each temporal filter adapts to a temporal component of each slice for filtering the one or more high frequency slices at a greater rate than the one or more low frequency slices.
15. (Previously presented) The computer readable storage medium of claim 7, further comprising computer instructions for applying Laplacian pyramid decomposition to perform the decomposition of the spatial image signal.
16. (Previously presented) The computer readable storage medium of claim 7, further comprising computer instructions for applying Gaussian pyramid decomposition to perform the decomposition of the spatial image signal.
17. (Previously presented) The computer readable storage medium of claim 7, further comprising computer instructions for applying adaptive temporal recursive filtering to perform the temporal filtering of the at least a portion of the slices.
18. (Previously presented) The computer readable storage medium of claim 7, wherein the temporal filtering comprises adaptive filtering.

19. (Currently amended) The computer readable storage medium of claim 7, ~~further comprising computer instructions for displaying the recomposed images of the sequence~~ wherein the filter comprises one or more temporal filters where each temporal filter adapts to a temporal component of each slice for filtering the one or more high frequency slices at a greater rate than the one or more low frequency slices.

20. (Currently amended) The computer readable storage medium of claim 7, wherein the ~~temporal filtering comprises motion compensation~~ decomposition is performed for each image of a sequence of images.

21. (Previously presented) The system of claim 1, wherein the filter comprises one or more temporal filters where each temporal filter adapts to a temporal component of each slice for filtering the one or more high frequency slices at a greater rate than the one or more low frequency slices.